

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	4	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	5	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	6	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	7	MAR 02	GBFULL: New full-text patent database on STN
NEWS	8	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	9	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	10	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	11	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	12	MAR 22	PATDPASPC - New patent database available
NEWS	13	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	14	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	15	APR 04	EMBASE - Database reloaded and enhanced
NEWS	16	APR 18	New CAS Information Use Policies available online
NEWS	17	APR 25	Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS	18	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 07:31:53 ON 06 MAY 2005

```
=> file reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
FULL ESTIMATED COST          0.21          0.21
```

FILE 'REGISTRY' ENTERED AT 07:32:08 ON 06 MAY 2005
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

```
STRUCTURE FILE UPDATES:      4 MAY 2005  HIGHEST RN 849790-35-8
DICTIONARY FILE UPDATES:     4 MAY 2005  HIGHEST RN 849790-35-8
```

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
 information enter HELP PROP at an arrow prompt in the file or refer
 to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

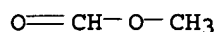
```
=> e methyl formate/cn
E1      1      METHYL FLUOSULFONATE/CN
E2      1      METHYL FLURBIPROFEN/CN
E3      1  --> METHYL FORMATE/CN
E4      1      METHYL FORMATE CATION RADICAL/CN
E5      1      METHYL FORMATE COMPD. WITH THIONYL CHLORIDE (1:1)/CN
E6      1      METHYL FORMATE CONJUGATE MONOACID/CN
E7      1      METHYL FORMATE HYDRATE/CN
E8      1      METHYL FORMATE RADICAL CATION/CN
E9      1      METHYL FORMATE SYNTHASE/CN
E10     1      METHYL FORMATE-BORON TRICHLORIDE COMPLEX (1:1)/CN
E11     1      METHYL FORMATE-CARBONYL-180/CN
E12     1      METHYL FORMATE-D4/CN
```

```
=> e3
L1      1  "METHYL FORMATE"/CN
```

```
=> d l1
```

```
L1  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2005 ACS on STN
RN  107-31-3  REGISTRY
ED  Entered STN: 16 Nov 1984
CN  Formic acid, methyl ester (6CI, 8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN  Methanoic acid methyl ester
CN  Methyl formate
```

CN Methyl methanoate
 CN R 611
 FS 3D CONCORD
 MF C2 H4 O2
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHM, CSNB, DETHERM*, DIPPR*,
 EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*,
 HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
 NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA,
 ULIDAT, USPAT2, USPATFULL, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

4174 REFERENCES IN FILE CA (1907 TO DATE)
 15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 4177 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 133 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	6.87	7.08

FILE 'CAPLUS' ENTERED AT 07:32:53 ON 06 MAY 2005
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 May 2005 VOL 142 ISS 19
 FILE LAST UPDATED: 4 May 2005 (20050504/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l1/prep

4179 L1
 3299000 PREP/RL
 L2 833 L1/PREP
 (L1 (L) PREP/RL)

=> carbon monoxide

1117063 CARBON
24819 CARBONS
1126102 CARBON
(CARBON OR CARBONS)
166121 MONOXIDE
973 MONOXIDES
166636 MONOXIDE
(MONOXIDE OR MONOXIDES)
L3 140565 CARBON MONOXIDE
(CARBON (W) MONOXIDE)

=> methoxide

11064 METHOXIDE
393 METHOXIDES
L4 11230 METHOXIDE
(METHOXIDE OR METHOXIDES)

=> l2 and l3

L5 248 L2 AND L3

=> l2 and l5

L6 248 L2 AND L5

=> superficial velocity

22021 SUPERFICIAL
4 SUPERFICIALS
22022 SUPERFICIAL
(SUPERFICIAL OR SUPERFICIALS)
338194 VELOCITY
65747 VELOCITIES
371079 VELOCITY
(VELOCITY OR VELOCITIES)
L7 1657 SUPERFICIAL VELOCITY
(SUPERFICIAL (W) VELOCITY)

=> l6 and l7

L8 0 L6 AND L7

=> mthanol

0 MTHANOL
L9 0 MTHANOL

=> methanol

178324 METHANOL
673 METHANOLS
L10 178677 METHANOL
(METHANOL OR METHANOLS)

=> l5 and l10

L11 207 L5 AND L10

=> d l11 197-207 ti

L11 ANSWER 197 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of **methanol** and derived compounds by homogeneous
Fischer-Tropsch-type reactions

L11 ANSWER 198 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Electrochemical synthesis of N-alkylformamides

L11 ANSWER 199 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous catalysis of **carbon monoxide** hydrogenation

L11 ANSWER 200 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous **carbon monoxide** hydrogenation to

methanol catalyzed by soluble ruthenium complexes

- L11 ANSWER 201 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Oxalic acid esters
- L11 ANSWER 202 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalyst for the preparation of alkyl ester of formic acid
- L11 ANSWER 203 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate
- L11 ANSWER 204 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate
- L11 ANSWER 205 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of **methanol** at low pressures
- L11 ANSWER 206 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalytic manufacture of methyl formate
- L11 ANSWER 207 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of methyl formate from **methanol** and **carbon monoxide** at high pressure using alkali activated charcoal as catalyst

=> potassium methoxide

- 558083 POTASSIUM
15 POTASSIUMS
558085 POTASSIUM
(POTASSIUM OR POTASSIUMS)
11064 METHOXIDE
393 METHOXIDES
11230 METHOXIDE
(METHOXIDE OR METHOXIDES)
- L12 619 POTASSIUM METHOXIDE
(POTASSIUM(W) METHOXIDE)

=> l11 and l12

- L13 17 L11 AND L12

=> d l13 1-17 ti

- L13 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Low-temperature **methanol** synthesis in catalytic systems composed of copper-based oxides and alkali alkoxides in liquid media: effects of reaction variables on catalytic performance
- L13 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI One-step synthesis of **methanol** from CO/H₂ at low temperature over ultrafine CuB catalysts
- L13 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI In situ FTIR study on reaction pathways in Ni(CO)₄/CH₃OK catalytic system for low-temperature **methanol** synthesis in a liquid medium
- L13 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate, its continuous production and device therefor
- L13 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Study on activity of alkali methoxide catalysts for carbonylation of **methanol**
- L13 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective formation of **methanol** over nickel carbonyl with

potassium methoxide

- L13 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Hydrogenation catalysts for manufacture of **methanol**, their preparation method, and manufacture of **methanol**
- L13 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Studies on a new catalytic system for heterogeneous carbonylation of **methanol** to methyl formate
- L13 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of methyl formate by carbonylation of **methanol** with decreased catalyst losses
- L13 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Slurry phase synthesis of **methanol** with a **potassium methoxide**/copper chromite catalytic system
- L13 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI A novel synthesis of **methanol**
- L13 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for combined production of **methanol**/methyl formate and power
- L13 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Kinetic parameters in the carbonylation step of the low temperature synthesis of **methanol**
- L13 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems
- L13 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous catalysis of methyl formate production from **carbon monoxide** and **methanol** in the presence of metal carbonyl catalysts
- L13 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from **carbon monoxide** and **methanol**
- L13 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate

=> d l13 14-17 ti fbib abs

- L13 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems
- AN 1988:528300 CAPLUS
DN 109:128300
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems
- AU Darensbourg, Donald J.; Gray, Robert L.; Ovalles, Cesar
CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA
SO Journal of Molecular Catalysis (1987), 41(3), 329-47
CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English

OS CASREACT 109:128300
 AB HCO₂R (R = alkyl) production from ROH and CO catalyzed by homogeneous transition metal carbonyl complexes in the presence of alkali metal alkoxides is reported. A significant increase in the number of turnovers of this reaction by Group VI metal carbonyl/alkoxide catalysts over the alkali metal alkoxide-catalyzed process is due to the dual role of the metal carbonyl to provide a more electrophilic CO source and to promote the removal of trace H₂O impurities via water-gas shift chemical. The key intermediate in the proposed catalytic cycle is a short-lived metallo-ester derivative, which at >100° is protonated by ROH to give HCO₂R. The reactivity of the metal carbonyl with alkali metal alkoxides is affected sharply by the solvent system used; e.g., THF is much more effective than ROH. Similarly, reaction of Ru₃(CO)₁₂ with ROH in the presence of alkoxides and CO also gave HCO₂R. In addition, a convenient route to ¹³C-enriched Ru₃(CO)₁₂ is achieved in the presence of trace amts. of alkoxides. In the absence of CO, XRu₃(CO)₁₀Y (X = H, OR; Y = OR) derivs. are produced by direct reaction of Ru₃(CO)₁₂ with ROH.

L13 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Homogeneous catalysis of methyl formate production from **carbon monoxide** and **methanol** in the presence of metal carbonyl catalysts
 AN 1985:595807 CAPLUS
 DN 103:195807
 TI Homogeneous catalysis of methyl formate production from **carbon monoxide** and **methanol** in the presence of metal carbonyl catalysts
 AU Darensbourg, Donald J.; Gray, Robert L.; Ovalles, Cesar; Pala, Magdalena
 CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA
 SO Journal of Molecular Catalysis (1985), 29(2), 285-90
 CODEN: JMCADS; ISSN: 0304-5102
 DT Journal
 LA English
 OS CASREACT 103:195807
 AB Homogeneous W and Ru carbonyl derivs., e.g., Et₄N[HW₂(CO)₁₀], W(CO)₆/KOME, catalyzed the preparation of HCO₂Me from CO and MeOH.

L13 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from **carbon monoxide** and **methanol**
 AN 1985:6786 CAPLUS
 DN 102:6786
 TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from **carbon monoxide** and **methanol**
 AU Darensbourg, Donald J.; Gray, Robert L.; Pala, Magdalena
 CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA
 SO Organometallics (1984), 3(12), 1928-30
 CODEN: ORGND7; ISSN: 0276-7333
 DT Journal
 LA English
 OS CASREACT 102:6786
 AB The enhanced CO lability exhibited by Ru₃(CO)₁₂ in the presence of KOME, where methoxycarbonyl adduct formation occurs, was used in the ready synthesis of highly ¹³C-enriched Ru₃(CO)₁₂. The methoxycarbonyl adduct is in equilibrium with Ru₃(CO)₁₂ in MeOH or MeOH-THF in the absence of added OMe-, indicative of substantial electrophilic character in the CO ligands of this trinuclear cluster. The possible role of this methoxycarbonyl adduct in the catalytic synthesis of HCO₂Me from CO-MeOH is discussed.

L13 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Methyl formate
 AN 1974:463162 CAPLUS
 DN 81:63162

TI Methyl formate
 IN Wakamatsu, Hachiro; Shimomura, Koichi
 PA Ajinomoto Co., Inc.
 SO U.S., 4 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3816513	A	19740611	US 1971-178933	19710909
				US 1971-178933	A 19710909
AB	Me formate was produced continuously by reaction of CO with MeOH over KOMe. Sufficient H was present to convert the excess CO to MeOH, which was recycled to the reactor.				

=>

=> logoff hold

	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

SESSION WILL BE HELD FOR 60 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 07:55:28 ON 06 MAY 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
 SESSION RESUMED IN FILE 'CAPLUS' AT 08:05:39 ON 06 MAY 2005
 FILE 'CAPLUS' ENTERED AT 08:05:39 ON 06 MAY 2005
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

=> logoff hold

	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

SESSION WILL BE HELD FOR 60 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 08:05:47 ON 06 MAY 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 08:30:59 ON 06 MAY 2005
FILE 'CAPLUS' ENTERED AT 08:30:59 ON 06 MAY 2005
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

=> d his

(FILE 'HOME' ENTERED AT 07:31:53 ON 06 MAY 2005)

FILE 'REGISTRY' ENTERED AT 07:32:08 ON 06 MAY 2005
E METHYL FORMATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 07:32:53 ON 06 MAY 2005

L2 833 L1/PREP
L3 140565 CARBON MONOXIDE
L4 11230 METHOXIDE
L5 248 L2 AND L3
L6 248 L2 AND L5
L7 1657 SUPERFICIAL VELOCITY
L8 0 L6 AND L7
L9 0 METHANOL
L10 178677 METHANOL
L11 207 L5 AND L10
L12 619 POTASSIUM METHOXIDE
L13 17 L11 AND L12

=> l2 and l7

L14 0 L2 AND L7

=> carbonylation

10971 CARBONYLATION
172 CARBONYLATIONS
L15 11007 CARBONYLATION
(CARBONYLATION OR CARBONYLATIONS)

=> l7 and l15

L16 2 L7 AND L15

=> d l16 1-2 ti

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalytic **carbonylation** method for the manufacture of acetic acid from methanol and carbon dioxide using a bubble-column reactor

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
TI Mathematical modeling of low-temperature liquid phase methanol synthesis

process in a bubble slurry reactor

=> l3 and l4

L17 285 L3 AND L4

=> l7 and l17

L18 0 L7 AND L17

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
62.14	69.22

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-2.92	-2.92

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 08:36:28 ON 06 MAY 2005